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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. | | | | |
|--|---------------|----------------------|--|-------------------|---------------|------------|---------------|--|
| 10/501,925 | 07/28/2004 | Jann Schmidt | 255898US0PCT | 2156 | | | | |
| 22850 | 7590 | 01/22/2008 | | | | | | |
| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | <table border="1"><tr><td colspan="2">EXAMINER</td></tr><tr><td colspan="2">AHMAD, NASSER</td></tr></table> | | EXAMINER | | AHMAD, NASSER | |
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| AHMAD, NASSER | | | | | | | | |
| | | | <table border="1"><tr><td>ART UNIT</td><td>PAPER NUMBER</td></tr><tr><td>1794</td><td></td></tr></table> | ART UNIT | PAPER NUMBER | 1794 | | |
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| | | | <table border="1"><tr><td>NOTIFICATION DATE</td><td>DELIVERY MODE</td></tr><tr><td>01/22/2008</td><td>ELECTRONIC</td></tr></table> | NOTIFICATION DATE | DELIVERY MODE | 01/22/2008 | ELECTRONIC | |
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| 01/22/2008 | ELECTRONIC | | | | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

| | | | |
|------------------------------|-------------------------------|--------------------------------|--|
| Office Action Summary | Application No. 10/501,925 | Applicant(s) SCHMIDT ET AL. | |
| | Examiner Nasser Ahmad | Art Unit 1794 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 11/13/2007 has been entered.

Rejection Maintained

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being obvious over Khanarian (5881201) made in the Office Action of 12/14/2006 and maintained in the Office Action of 12/14/2006 has been withdrawn in view of the amendment filed on 11/13/2007.

Response to Arguments

3. Applicant's arguments with respect to claims 1-18 and new claims 19-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

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4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being obvious over Khanarian (5881201).

Khanarian relates to (for claim 1) a light-guide body (figures 3A and 3B) which has at least one light-entry surface (from the left side in the drawings) and at least one light-exit surface (shown by the arrows exiting the upper surface of the body), the ratio of the light-exit surface area to the light-entry surface area being at least greater than 1 (because of the surface area dimension of the two surfaces). The light-guiding layer comprises at least 60% by weight (col. 5, line 1), expressed in terms of the weight of the light-guiding layer of polymethyl methacrylate (col. 4, lines 40-43) and from 0.001 to 0.08% by weight (col. 5, line 1), expressed in terms of the weight of the light-guiding layer, of spherical particles (col. 4, lines 5-39) with an average diameter in the range of from 0.3 to 40 microns (col. 4, line 10), and the light-exit surface of the light-guiding layer is provided with structurings (figures 3A and 3B). However, Khanarian fails to teach that the ratio of the light exit surface area to the light entry surface area is at least 4 and that the structurings have a depth in the range of from 0.1 to 1000 microns. It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Khanarian by providing the ratio of at least 4 because figures 3A or

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3B shows the light exiting surface to be comparatively much larger than the light entry area, based on optimization through routine experimentation, for optimum light scattering properties.

Further, it would have been obvious to one having ordinary skill in the art to provide the structurings to have a depth of 0.1 to 1000 microns because applicant acknowledges, in the specification, page-14, lines 6-13, that the structurings can be surface defects and, as such, it is well known in the manufacturing of light guide to have surface defects. then, to have a depth of 0.1-1000 microns would have been obvious to one having ordinary skill in the art as produced by the manufacturing defect on the surface thereof.

For claim 2, the ratio of at least 20, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Khanarian by providing the ratio of at least 20 because figures 3A or 3B shows the light exiting surface to be comparatively much larger than the light entry area, based on optimization through routine experimentation, for optimum light scattering properties.

For claim 3, the thickness of the light guiding layer of 1-4 mm, see col. 6, lines 31-33.

The particles of claims 4-5 can be of plastic, such as polystyrene (col. 4, line 36).

Figure 3B shows the light-exit surface having a uniform structuring for claim 6.

For claim 7, the non-uniform structuring is shown in figure-3A by the wedge shaped surface.

Regarding claim 8, based on figures 3A and 3B, the light exit surface structuring is inherently in line or point form.

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For claim 9, the methyl methacrylate is at least 90% of the light-guide body (col. 5, line 1).

Claim 10, the average diameter of the particle is in the range of 0.01-10 micron which reads on the claimed range of 1.4-10 microns.

For claim 11, Khanarian, in col. 5, line 1 teaches that the particles is present in an amount of 0.01% by weight, which falls in the claimed range of 0.0005 to 0.08% by weight.

Regarding claims 12-13, the refractive index of light guiding layer would inherently exhibit in the range of from 1.48 to 1.54 or the light transmission is from 75-92% because the polymethyl methacrylate material being the same as claimed.

Claim 14 is shown in figure-3A.

For claim 15, the at least one surface, which is parallel to the light entry surface is configured to be a reflective layer because the surface opposite the light entry surface is not shown to permit light exiting, or in the alternative, the edge surface of the reflective layer in figures 3A and 3B at the entry surface is found to be parallel to the light entry surface.

For claim 16, the light guide body is made by molding.

Regarding claim 17, the components (C) and (D) are interpreted to be zero and the components (A) and (B) are disclosed by Khanarian.

Claim 18, the light source is shown in figures 3A and 3B as CCFL, which is a fluorescent light.

For claim 19, the structurings depth from 1-100 microns would have been obvious to one having ordinary skill in the art based on surface defects due to the manufacturing process.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Khanarian in view of the English Abstract of Japanese:2000-13677.

Khanarian, as discussed above, fails to teach that the scattering particles includes barium sulfate. The English Abstract of JP'677 discloses that the light guide boy contains barium sulfate particles as the light diffusing medium. Therefore, it would have been obvious to one having ordinary skill in the art to substitute barium sulfate particles, for the particles in Kanarian because the two particle materials are functionally equivalent as light scattering medium.

Response to Arguments

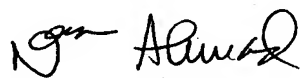
7. In response to applicant's argument for the claimed structurings and it's depth, applicant is directed to the instant specification, page-14, wherein it is expressly stated that the structurings can be surface defects and the recited depth of 0.1-1000 microns is understood to be part of the defect from the manufacturing process. applicant has failed to stablish that the claimed depth range is not part of the surface defect as admited in the specification.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nasser Ahmad whose telephone number is 571-272-1487. The examiner can normally be reached on 7:30 AM to 5:00 PM, and on alternate Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rena Dye can be reached on 571-272-3186. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Nasser Ahmad
Primary Examiner
Art Unit 1794
1/16/08

N. Ahmad.
January 16, 2008.